INTERNATIONAL STANDARD

ISO 10295-2

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Fire tests for building elements and components — Fire testing of service installations —

Part 2: Linear joint (gap) seals

Essais au feu pour les éléments et composants de bâtiment — Essai au feu des installations de service —

Partie 2: Joints d'étanchéité pour interstices linéaires

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Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 10295-2 was prepared by Technical Committee ISO/TC 92, *Fire safety*, Subcommittee SC 2, *Fire containment*.

ISO 10295 consists of the following parts, under the general title *Fire tests for building elements and components — Fire testing of service installations*:

— *Part 1: Penetration seals*

— *Part 2: Linear joint (gap) seals*

A Part 3 dealing with guidance on the use of a test configuration to establish the direct and extended fields of application for single-component penetration seals is under development.

Introduction

This part of ISO 10295 describes test methods used to determine the fire resistive nature of joint seals when subjected to the standard fire-exposure conditions outlined in ISO 834-1. The test data generated by this International Standard permit the classification of these various joint seals based on their intended use and fire resistance under the specified acceptance criteria of this part of ISO 10295.

Joint seals are positioned in joints, voids, gaps or other discontinuities between or bounded by two or more supporting elements. Normally such openings are denoted as “linear” because the length is greater than the width, defined by a typical ratio of at least 10:1 as in practice. Joints are present in buildings as a result of

a) design to accommodate various movements induced by thermal differentials, seismic events and wind loads and exist as a clearance separation;

b) acceptable dimensional tolerances between two or more building elements, e.g. between non-load-bearing walls and floors;

c) inadequate design, inaccurate assembly, repairs or damage to the building.

This part of ISO 10295 describes methods of test for evaluating joint seals based on their intended use. This part of ISO 10295 also allows for the application of movement prior to and/or during fire testing.

This part of ISO 10295 provides the requirements for the test specimen, the test construction, the equipment (including any special apparatus or instrumentation), the procedures and acceptance criteria as they apply to joint seals and their supporting elements.

Fire tests for building elements and components — Fire testing of service installations —

Part 2: Linear joint (gap) seals

CAUTION — The attention of all persons concerned with managing and carrying out this fire-resistance test is drawn to the fact that fire testing can be hazardous and that there is a possibility that toxic and/or harmful smoke and gases can be evolved during the test. Mechanical and operational hazards can also arise during the construction of the test elements or structures, their testing and disposal of test residues.

An assessment of all potential hazards and risks to health shall be made and safety precautions shall be identified and provided. Written safety instructions shall be issued. Appropriate training shall be given to relevant personnel. Laboratory personnel shall ensure that they follow written safety instructions at all times.

1 Scope

This part of ISO 10295 specifies the heating conditions, methods of test and criteria for the evaluation of the ability of a linear joint seal to maintain the fire integrity and thermal insulation of a fire-separating element at the joint being sealed. The purpose of the tests is to assess the integrity and insulation performance of the linear joint seals, including the effects of induced movement in those cases where the joint is designed to accommodate movement and has a width greater than 20 mm.

It is not the intention of this part of ISO 10295 to provide quantitative information on the rate of leakage of smoke and/or gases, or on the transmission or generation of fumes, although such phenomena can be recorded in describing the general behaviour of specimens during the test. It is not the intention of this part of ISO 10295 to evaluate joint seals where special test procedures already exist, e.g. doors, partitions, penetrations, pipes, ducts and cables.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 834-1, *Fire-resistance tests — Elements of building construction — Part 1: General requirements*

ISO 13943, *Fire safety — Vocabulary*